

REMARKS

Status of Claims:

Claims 1-56 were originally filed with the patent application. Claim 49 has been canceled. Claims 57-62 have been added. Therefore, Claims 1-48 and 50-62 will be pending upon entry of this Amendment and Response.

Allowable Subject Matter:

Applicant notes with appreciation the Examiner's indication that Claims 7-10, 19-22, 27, 29-31, 39-41, 47, 48, and 56 present allowable subject matter.

§112 Rejections:

Claims 11, 19, 23, 39, and 47 have each been amended to address the outstanding rejection under 35 U.S.C. §112, second paragraph.

Independent Claims 1, 23, and 43:

Independent Claims 1, 23, and 43 each directed to a disk drive that includes an actuator arm latch assembly that includes a latch pivot and a first latch member that is movably mounted on the latch pivot. This first latch member moves from a non-latching position to a latching position in response to the disk drive experiencing a shock event. Such a latch member that moves in this manner is not disclosed by U.S. Patent No. 6,088,193 ('193 Patent).

The '193 Patent discloses a latch 138 that includes a magnetized head 178. The latch 138 is moved from the unlatched position of Figure 5 to the latched position of Figure 4 by the actuator assembly 112 moving to the parked position to dispose the read/write heads 120 in the landing zone

130 of the corresponding disc 108 (column 6, lines 1-29). Specifically, the actuator assembly 112 is moved by the voice coil motor (VCM) 124 to dispose the read/write heads 120 over the landing zone 130 of the corresponding disc 108. During this movement, a pin 140 supported by the actuator assembly 112 engages a surface 190 of the latch 138 and exerts a force on the latch 138 along the direction of arrow 188 in Figure 5. The pin 140 engages the latch 138 at a location that is spaced from its pivot axis (corresponding with pin 172) such that the latch 138 pivots from the position illustrated in Figure 5 the position illustrated in Figure 4. Therefore, the latch 138 of the '193 Patent does not move from a non-latching position to a latching position in response to a shock event in the manner required of the first latch member of Claims 1, 23, and 43. Instead, the parking of the read/write heads 120 at the termination of normal disk drive operation moves the latch 138 from the non-latching position to the latching position. Applicant notes that the latch 138 is retained in the latched position of Figure 4 by a magnetic engagement between the head 178 of the latch 138 and the top pole 129 of the VCM 124. Similarly, the latch 138 is retained in the unlatched position of Figure 5 by a magnetic engagement between the head 178 of the latch 138 and the bottom pole 129 of the VCM 124. Nothing other than the force exerted on the latch 138 by the VCM 124 moving the actuator assembly 112 is identified as being sufficient to overcome this magnetic engagement that exists in both the latched and unlatched positions in the case of the '193 Patent.

Based upon the foregoing, independent Claims 1, 23, and 43 are each allowable over the '193 Patent. All claims depending from either of Claims 1, 23, or 43 are thereby also allowable over the '193 Patent for the above-noted reasons. There is therefore no need to separately address the patentability of each of these claims and/or the Examiner's interpretation in relation to any of these claims or any of the references of record in relation thereto. Applicant notes that dependent Claims 57-59 (depending from Claims 1, 23, and 43, respectively) each provide that the actuator arm latch

assembly further includes a first inertial mass, and that an acceleration of this first inertial mass due to a shock event causes the first inertial mass to exert a force on the first latch member that attempts to move the first latch member from the non-latching position to the latching position. The pin 172 referred to by the Examiner in the Office Action as being an "inertial mass" does not meet these requirements.

Independent Claim 50:

Independent Claim 50 is a method for reducing a potential for contact between a head and a data storage disk of a disk drive. When the disk drive is exposed to a first shock event after the head has been parked, a first latching member moves from a non-latching position to a latching position in response to such a first shock event to preclude the head for moving across the data storage disk. When the disk drive is exposed to a second shock event after the head has been parked, the first latching member again moves from a non-latching position to a latching position in response to such a second shock event to also preclude the head for moving across the data storage disk. At least a primary component of the first shock event is parallel with the data storage disk (e.g., within the x-y plane), while at least a primary component of the second shock event is at least generally perpendicular to the data storage disk (e.g., in the "z" dimension).

Claim 50 stands rejected based upon the '193 Patent. Applicant respectfully request reconsideration since the '193 Patent does not disclose the combination of features presented by Claim 50. As discussed above, the '193 Patent does not disclose moving its latch 138 from a non-latching position to a latching position in response to any type of shock event. Instead, the '193 Patent discloses moving the actuator assembly 112 toward a parked position at the end of normal disk drive operations. During this movement, a pin 140 supported by the actuator assembly 112

engages a surface 190 of the latch 138 and exerts a force on the latch 138 along the direction of arrow 188 in Figure 5. The pin 140 engages the latch 138 at a location that is spaced from its pivot axis (corresponding with pin 172) such that the latch 138 pivots from the position illustrated in Figure 5 the position illustrated in Figure 4. Therefore, the VCM 124 acting on the actuator assembly 112, and not a shock event of any kind, is responsible for generating the forces required to move the latch 138 between the unlatched and latched positions.

Based upon the foregoing, independent Claim 50 is allowable over the '193 Patent. All claims depending from Claim 50 are thereby also allowable over the '193 Patent for the above-noted reasons. There is therefore no need to separately address the patentability of each of these claims and/or the Examiner's interpretation in relation to any of these claims or any of the references of record in relation thereto.

New Claims 60 and 62:

Independent Claims 60 and 62 have been added, and each present a combination of features that are not disclosed by the '193 Patent.

Conclusion:

Based upon the foregoing, Applicant believes that all pending claims are in condition for allowance and such a disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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